

SUPPLEMENTARY MATERIALS
Prevalence of and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years
Autism and Developmental Disabilities Monitoring (ADDM) Network, 11 Sites, United States, 2020

SUPPLEMENTARY TABLE 1 – Comparison of prevalence* of autism spectrum disorder among children aged 8 years, by state, sex, race/ethnicity
— Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2018 and 2020

Site	Surveillance Year 2018			Surveillance Year 2020			Percent change	Geographic surveillance areas or data source changes for 2018 and 2020
	No. Children with ASD	Denominator	ASD prevalence per 1,000	No. Children with ASD	Denominator	ASD prevalence per 1,000		
Total	5058	220281	23 (22.3-23.6)	6245	226339	27.6 (26.9-28.3)	20.0	
Arizona	331	13313	24.9 (22.4-27.6)	360	13118	27.4 (24.8-30.4)	10.0	Same area, added Medicaid data
Arkansas	353	15435	22.9 (20.6-25.3)	362	15432	23.5 (21.2-26.0)	2.6	No changes
California	586	15076	38.9 (35.9-42.1)	710	15828	44.9 (41.7-48.2)	15.4	No changes
Georgia	514	23580	21.8 (20.0-23.7)	553	21921	25.2 (23.2-27.4)	15.6	Switched 1 of 2 counties
Maryland	423	20666	20.5 (18.6-22.5)	491	21278	23.1 (21.1-25.2)	12.7	Same area, less access to educational records in 2018 due to pandemic
Minnesota	277	10081	27.5 (24.5-30.9)	482	16150	29.8 (27.3-32.6)	8.4	added school districts within same counties
Missouri	405	24481	16.5 (15.0-18.2)	601	24561	24.5 (22.6-26.5)	48.5	Same area, increased education data access
New Jersey	491	17289	28.4 (26.0-31.0)	544	18940	28.7 (26.4-31.2)	1.1	added small school district within same counties
Tennessee	573	25237	22.7 (20.9-24.6)	713	25588	27.9 (25.9-30.0)	22.9	No changes
Utah	548	25459	21.5 (19.8-23.4)	621	24734	25.1 (23.2-27.1)	16.7	Same area, less access in 2018 due to pandemic
Wisconsin	557	29664	18.8 (17.3-20.4)	808	28789	28.1 (26.2-30.0)	49.5	Same, increased education data access
Boys	4111	112619	36.5 (35.4-37.6)	4894	115835	43.0 (41.9, 44.2)	17.8	
Girls	945	107662	8.8 (8.2-9.4)	1255	110504	11.4 (10.7-12.0)	29.5	
Non-Hispanic White	2407	113730	21.2 (20.3-22.0)	2680	110298	24.3 (23.4- 25.2)	14.6	

Non-Hispanic Black	1041	46717	22.3 (21.0-23.7)	1384	47156	29.3 (27.9- 30.9)	31.4
Hispanic	1019	45228	22.5 (21.2-23.9)	1331	42129	31.6 (30.0- 33.3)	40.4
Non-Hispanic Asian or Pacific Islander	294	13260	22.2 (19.8-24.8)	476	14272	33.4 (30.5- 36.4)	50.5
Two or more races	--	--	--	261	11391	22.9 (20.3- 25.8)	--
American Indian / Alaska Native	39	1346	29.0 (21.3-39.3)	29	1093	26.5 (18.5- 37.8)	-8.6

SUPPLEMENTARY TABLE 2. Prevalence* ratios for autism spectrum disorder among children aged 8 years, by race/ethnicity — Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2020

SITE	Prevalence ratios (95% CI)						Non-Hispanic White: Non-Hispanic Two or more races	Non-Hispanic Black: Non-Hispanic Two or more races	Hispanic: Non-Hispanic 2 or more races	Non-Hispanic Asian / Pacific Islander : Non-Hispanic 2 or more races
	Non-Hispanic White to non-Hispanic Black	Non-Hispanic White to Hispanic	Non-Hispanic Black to Hispanic	Non-Hispanic White to Non-Hispanic Asian/Pacific Islander	Non-Hispanic Black to Non-Hispanic Asian/Pacific Islander	Hispanic to Non-Hispanic Asian/Pacific Islander				
Arizona	1.1 (0.7- 1.8)	1.1 (0.9- 1.4)	1.0 (0.6- 1.5)	†	†	†	1.4 (0.8- 2.4) †	1.2 (0.6- 2.4) †	1.3 (0.7- 2.2) †	† †
Arkansas	0.9 (0.7- 1.2)	0.7 (0.5- 1.0)§	0.8 (0.5- 1.1)	0.4 (0.2- 0.7)§	0.4 (0.2- 0.7)§	0.5 (0.3- 1.0)§				
California	0.9 (0.6- 1.2)	0.8 (0.7- 1.0)	1.0 (0.7- 1.3)	0.7 (0.5- 0.9)§	0.8 (0.6- 1.1)	0.8 (0.6- 1.0)§	1.0 (0.7- 1.3)	1.1 (0.8- 1.6)	1.1 (0.9- 1.5)	1.4 (1.0- 2.0)§
Georgia	0.7 (0.5- 0.8)§	0.8 (0.6- 1.0)	1.1 (0.9- 1.5)	0.8 (0.5- 1.1)	1.1 (0.8- 1.6)	1.0 (0.7- 1.5)	1.1 (0.6- 1.8)	1.6 (1.0- 2.7)	1.4 (0.8- 2.5)	1.4 (0.8- 2.6)
Maryland	0.5 (0.4- 0.6)§	1.0 (0.7- 1.4)	2.0 (1.4- 2.8)§	0.5 (0.4- 0.6)§	0.9 (0.7- 1.2)	0.5 (0.3- 0.7)§	0.9 (0.6- 1.3)	1.8 (1.2- 2.7)§	0.9 (0.5- 1.5)	1.9 (1.2- 3.0)§
Minnesota	1.1 (0.9- 1.4)	0.7 (0.6- 1.0)§	0.7 (0.5- 0.9)§	1.2 (0.9- 1.6)	1.1 (0.8- 1.6)	1.7 (1.2- 2.3)§	1.0 (0.7- 1.4)	0.9 (0.6- 1.3)	1.3 (0.9- 2.0)	0.8 (0.5- 1.2)
Missouri	0.8 (0.7- 1.0)§	1.4 (0.9- 2.2)	1.7 (1.1- 2.7)§	0.7 (0.5- 1.0)§	0.8 (0.6- 1.2)	0.5 (0.3- 0.9)§	2.3 (1.3- 4.1)§ †	2.8 (1.5- 4.9)§ †	1.6 (0.8- 3.4) †	3.4 (1.7- 6.6)§ †
New Jersey	0.6 (0.5- 0.8)§	0.6 (0.5- 0.8)§	1.0 (0.8- 1.2)	0.7 (0.5- 1.1)	1.2 (0.8- 1.7)	1.2 (0.8- 1.7)				
Tennessee	0.8 (0.6- 0.9)§	1.0 (0.8- 1.2)	1.2 (1.0- 1.6)	0.7 (0.5- 0.9)§	0.9 (0.6- 1.2)	0.7 (0.5- 1.0)	1.0 (0.7- 1.4)	1.3 (0.9- 1.8)	1.0 (0.7- 1.5)	1.5 (0.9- 2.4)
Utah	†	1.0 (0.9- 1.3)	†	0.9 (0.6- 1.3)	†	0.8 (0.6- 1.3)	1.4 (0.9- 2.1)	†	1.3 (0.8- 2.1)	1.5 (0.9- 2.7)
Wisconsin	1.1 (0.9- 1.3)	0.7 (0.6- 0.9)§	0.7 (0.5- 0.8)§	0.9 (0.7- 1.2)	0.8 (0.6- 1.1)	1.2 (0.9- 1.7)	0.9 (0.6- 1.2)	0.8 (0.6- 1.1)	1.2 (0.9- 1.6)	1.0 (0.6- 1.5)
Total	0.8 (0.8- 0.9)§	0.8 (0.7- 0.8)§	0.9 (0.9- 1.0)	0.7 (0.7- 0.8)§	0.9 (0.8- 1.0)§	0.9 (0.9- 1.0)	1.1 (0.9- 1.2)	1.3 (1.1- 1.5)§	1.4 (1.2- 1.6)§	1.5 (1.3- 1.7)§

* Per 1,000 children aged 8 years. (Overall American Indian/Alaska Native autism spectrum disorder prevalence per 1,000 was 21.6 [95% CI: 15.1–30.9]. Arizona was the only Autism and Developmental Disabilities Monitoring Network site meeting the threshold for statistical precision for American Indian/Alaska Native autism spectrum disorder prevalence; the site-specific prevalence per 1,000 was 24.0 [95% CI: 13.4–42.4].) As in the report, the denominator was based on the US Census vintage 2021 county-level single-year-of-age postcensal population estimates for 2020

† Estimate was suppressed because standard error for prevalence was ≥30% of estimate, or prevalence ratio was based on an estimate that was suppressed.

§ 95% CI does not include 1.0.

SUPPLEMENTARY TABLE 3. Prevalence* of autism spectrum disorder among children aged 8 years, by race/ethnicity — Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2020, using vintage 2020 NVSS Bridged Race Denominator

Site	Prevalence (95% CI)			Prevalence Ratio (95% CI)			
	Non-Hispanic White	Non-Hispanic Black	Hispanic (any race)	Non-Hispanic Asian/Pacific Islander	Non-Hispanic Black to White	Hispanic to White	Non-Hispanic Asian/Pacific Islander to White
Arizona	26.9 (23.1- 31.4)	20.6 (13.8- 30.8)	25.8 (22.0- 30.3)	†	0.8 (0.5- 1.2)	1.0 (0.8- 1.2)	†
Arkansas	21.6 (18.9- 24.7)	22.3 (18.1- 27.3)	32.4 (24.2- 43.2)	51.1 (29.4- 87.1)	1.0 (0.8- 1.3)	1.5 (1.1- 2.1)§	2.4 (1.3- 4.2)§
California	33.6 (28.5- 39.5)	32.4 (24.6- 42.4)	44.7 (40.4- 49.5)	47.6 (39.5- 57.2)	1.0 (0.7- 1.3)	1.3 (1.1- 1.6)§	1.4 (1.1- 1.8)§
Georgia	17.8 (14.8- 21.5)	27.1 (24.3- 30.2)	26.0 (20.4- 33.0)	23.0 (17.0- 31.0)	1.5 (1.2- 1.9)§	1.5 (1.1- 2.0)§	1.3 (0.9- 1.8)
Maryland	16.1 (14.0- 18.6)	31.8 (27.5- 36.9)	17.7 (12.6- 24.8)	33.3 (26.6- 41.6)	2.0 (1.6- 2.4)§	1.1 (0.8- 1.6)	2.1 (1.6- 2.7)§
Minnesota	28.6 (25.0- 32.8)	25.0 (20.7- 30.1)	41.8 (33.2- 52.4)	22.9 (17.9- 29.1)	0.9 (0.7- 1.1)	1.5 (1.1- 1.9)§	0.8 (0.6- 1.1)
Missouri	22.8 (20.6- 25.3)	25.7 (22.1- 29.8)	17.2 (11.1- 26.4)	28.8 (20.1- 41.0)	1.1 (0.9- 1.3)	0.8 (0.5- 1.2)	1.3 (0.9- 1.8)
New Jersey	20.3 (16.7- 24.6)	33.4 (29.0- 38.3)	34.2 (29.9- 39.1)	27.0 (19.3- 37.7)	1.6 (1.3- 2.1)§	1.7 (1.3- 2.1)§	1.3 (0.9- 2.0)
Tennessee	24.4 (22.1- 26.9)	30.3 (25.8- 35.6)	26.7 (21.8- 32.6)	33.8 (24.2- 47.1)	1.2 (1.0- 1.5)§	1.1 (0.9- 1.4)	1.4 (1.0- 2.0)
Utah	24.2 (22.0- 26.6)	†	24.4 (20.5- 29.1)	24.3 (17.0- 34.7)	†	1.0 (0.8- 1.2)	1.0 (0.7- 1.5)
Wisconsin	25.1 (22.8- 27.6)	21.2 (17.7- 25.4)	35.5 (30.7- 41.0)	27.0 (20.3- 35.9)	0.8 (0.7- 1.0)	1.4 (1.2- 1.7)§	1.1 (0.8- 1.5)
Total	23.4 (22.5- 24.3)	27.1 (25.7- 28.5)	32.0 (30.3- 33.7)	30.1 (27.5- 32.8)	1.2 (1.1- 1.2)§	1.4 (1.3- 1.5)§	1.3 (1.2- 1.4)§

* Per 1,000 children aged 8 years. (Overall American Indian/Alaska Native autism spectrum disorder prevalence per 1,000 was 21.6 [95% CI: 15.1–30.9]. Arizona was the only Autism and Developmental Disabilities Monitoring Network site meeting the threshold for statistical precision for American Indian/Alaska Native autism spectrum disorder prevalence; the site-specific prevalence per 1,000 was 24.0 [95% CI: 13.4–42.4].)

† Estimate was suppressed because standard error for prevalence was $\geq 30\%$ of estimate, or prevalence ratio was based on an estimate that was suppressed.

§ 95% CI does not include 1.0.

SUPPLEMENTARY TABLE 4. Occurrences of autism spectrum disorder (ASD) diagnosis or classification in records of children with ASD — Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2020

Site	Minimum <i>N</i>	Maximum <i>N</i>	Median <i>N</i>	Average <i>N</i>
Occurrences of ASD diagnosis				
Arizona	1	44	3	5.4
Arkansas	1	33	4	5.6
California	1	9	2	2.3
Georgia	1	23	3	4.1
Maryland	1	23	4	5.1
Minnesota	1	22	3	3.7
Missouri	1	11	2	2.7
New Jersey	1	69	6	9.8
Tennessee	1	5	1	1.5
Utah	1	15	2	2.7
Wisconsin	1	74	2	3.5
Total	1	74	2	4.2
Occurrences of ASD classification				
Arizona	1	16	5	5.6
Arkansas	1	13	3	3.9
California	1	13	6	6.1
Georgia	1	27	5	5.5
Maryland	1	15	4	4.5
Minnesota	1	13	5	5.5
Missouri	1	9	4	3.6
New Jersey	1	17	3	3.8
Tennessee	1	9	2	2.8
Utah	1	15	3	3.8
Wisconsin	1	7	2	2
Total	1	27	4	4.4

SUPPLEMENTARY TABLE 5. Additional detail on the availability and distribution of intelligence quotient scores among children aged 8 years with autism spectrum disorder (ASD) — Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2020

SITE	With IQ information			Cognitive level		
	Total no. with ASD	No.	% of total with ASD	Median (interquartile range) age in months of most recent test or impression	% IQ ≤70	% IQ >85*
Total	6245		4164 (66.7)	67 (51 – 81)	37.9	38.6
Arizona	360		291 (80.8)	79 (62-90.5)	30.9	39.9
Arkansas	362		330 (91.2)	72 (63-84)	48.2	29.4
California	710		617 (86.9)	69 (47-80)	21.7	51.4
Georgia	553		398 (72.0)	61.5 (43-75)	46.2	30.2
Maryland	491		294 (59.9)	67 (45.2-82)	46.6	32.3
Minnesota	482		414 (85.9)	71 (59-83)	31.6	53.4
Missouri	601		364 (60.6)	67 (59-75)	31.9	44.5
New Jersey	544		342 (62.9)	63 (55.2 – 85)	38.9	30.7
Tennessee	713		478 (67.0)	56 (35-71)	51.0	27.0
Utah	621		315 (50.7)	77 (63-88)	29.2	45.4
Wisconsin	808		321 (39.7)	55 (40-73)	48.9	31.8
Female	1255		808 (64.4) [†]	68 (50-81)	42.1 [¶]	36.8
Male	4984		3356 (67.3)	67 (51-82)	36.9	39.0
White	2680		1743 (65.0)	68 (52-82.5)	31.8	47.5
Black	1384		925 (66.8)	65 (47-79)	50.8	24.1
Hispanic	1331		916 (68.8)	68 (53-83.2)	34.9	37.6
Asian or Pacific Islander	476		339 (71.2)	69 (52-81)	41.3	36.9
Two or more races	261		193 (73.9)	66 (48-79)	37.8	37.3
American Indian / Alaska Native	29		23 (79.3)	69 (53-86.5)	34.8	26.1

*Includes 3 children stated to have an IQ score in the average range but specific score was not given.

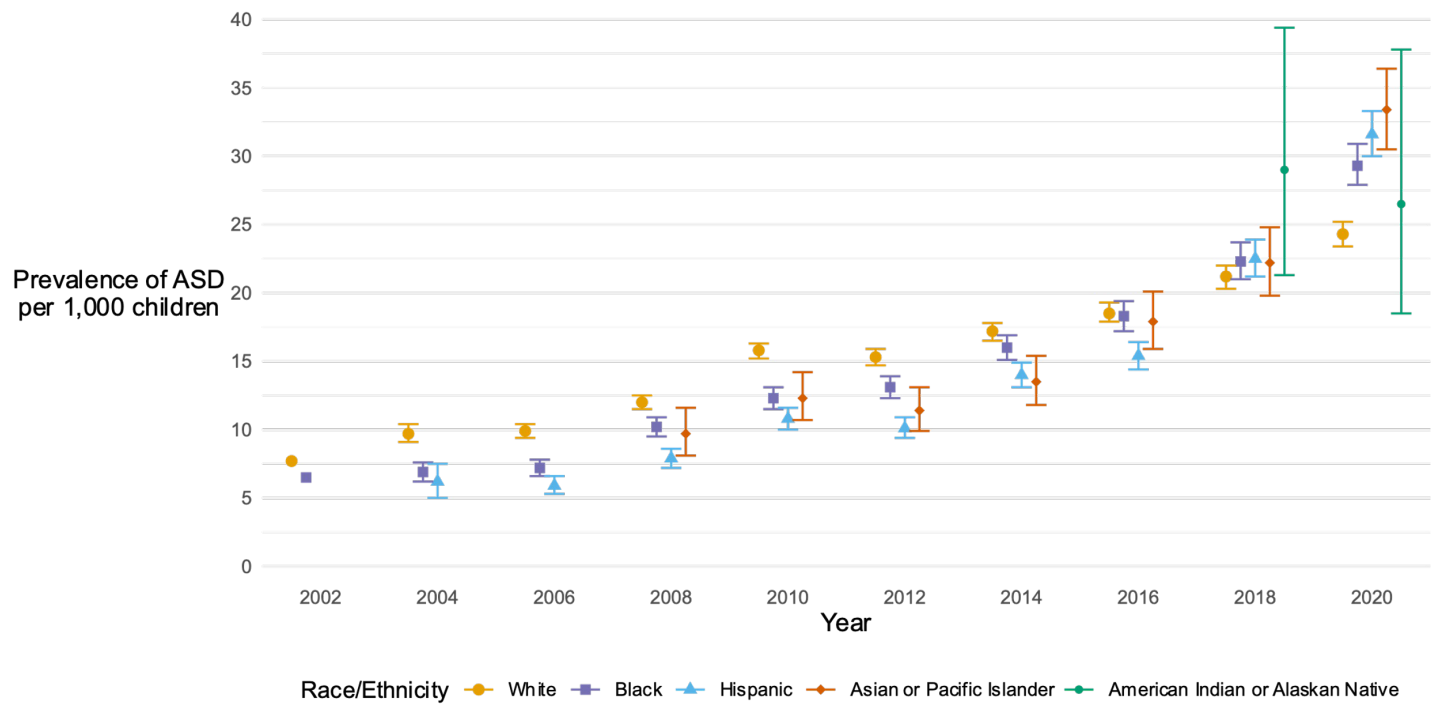
[†] Pearson chi-squared test for proportion of males versus females with ASD and IQ information, (p=0.049).

[¶] Pearson chi-squared test for proportion of males versus females with IQ ≤70 among children with ASD (p=0.007).

[§] Pearson chi-squared tests for proportion of non-Hispanic Black versus non-Hispanic White children with ASD and IQ information (p=0.27); proportion of non-Hispanic Black versus Hispanic children with IQ information (p<0.17); proportion of non-Hispanic White versus Hispanic children with IQ information (p = 0.03).

**Statistically significant differences for Pearson chi-squared tests for proportion of non-Hispanic Black versus non-Hispanic White children with IQ ≤70 among children with ASD (p <0.001); proportion of non-Hispanic Black versus Hispanic children with IQ information (p< 0.001); proportion of non-Hispanic White versus non-Hispanic Asian or Pacific Islander children with IQ ≤70 among children with ASD (p =0.001); proportion of non-Hispanic Black versus non-Hispanic Asian or Pacific Islander children with IQ ≤70 among children with ASD (p =0.007).

SUPPLEMENTARY FIGURE 1. Reported autism spectrum disorder (ASD) prevalence by race or ethnicity, ADDM Network 2002-2020.



*Shapes are point estimates and horizontal lines are 95% confidence intervals.